

September 26, 2002

The Honorable Jeanne Shaheen, Governor  
State House  
Concord, New Hampshire 03301

**Subject: Capacity Development Progress Report**

Dear Governor Shaheen:

We are submitting to you, pursuant to a provision in the 1996 amendments to the federal Safe Drinking Water Act (SDWA), a report titled, "Capacity Development Progress Report". This report summarizes the strategy and progress New Hampshire has made toward improving the capacity of its public water supply systems.

### **EXECUTIVE SUMMARY**

A provision in the 1996 Safe Drinking Water Act (SDWA) amendments requires each state to issue to its Governor a report that discusses the efficacy of the state's capacity development strategy and the progress the state has made toward improving the technical, managerial and financial capacity of its public water systems<sup>1</sup>.

By way of background, the term *capacity* is unique to the drinking water field and is not related to volume or competence, but rather toward ability and sustainability. A well-run public water supply system, therefore, is considered to have adequate "capacity". Because of the management and operation limitations brought about by economies of scale, inadequate capacity is mostly a concern associated with small public water suppliers, which are generally defined as those serving less than 1000 people. Rural housing developments, mobile home parks, and restaurants are typical examples of New Hampshire's small public water systems. An in-depth discussion on New Hampshire's Public Water Supply Capacity Program can be found at its website, [www.des.state.nh.us/wseb/capacity](http://www.des.state.nh.us/wseb/capacity).

The overwhelming majority of New Hampshire's approximately 2,100 public water systems are well managed and consistently produce safe drinking water for their

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<sup>1</sup> 42 U.S.C. 300g-9. 1420 (3): Report.--Not later than 2 years after the date on which a State first adopts a capacity development strategy under this subsection, and every 3 years thereafter, the head of the State agency that has primary responsibility to carry out this title in the State shall submit to the Governor a report that shall also be available to the public on the efficacy of the strategy and progress made toward improving the technical, managerial, and financial capacity of public water systems in the State.

customers. New Hampshire's local water commissioners, water works superintendents and other drinking water professionals are keenly aware of the vital role they play in protecting their customers' health and willingly conduct regulatory activities necessary to ensure safe drinking water.

On August 4, 2000, DES issued a report to then USEPA New England Regional Administrator John DeVillars titled "New Hampshire's Capacity Assurance Strategy for Existing Public Water Systems" (NHCASEPWS, see attached.) That report describes New Hampshire's strategy to improve and maintain the technical, managerial and financial capacity of existing public water supply systems

DES is pleased to report it has successfully achieved many of the capacity program goals set forth two years ago in the NHCASEPWS. We believe our approach initially to focus our capacity development efforts on education and outreach has created a wealth of useful information and an accommodating stakeholder environment within which future capacity development initiatives will be more readily received. Convincing the owners of otherwise "compliant" systems that they could make improvements and changes to the ways in which they manage and operate their water system has proved to be an ongoing challenge for the capacity development program.

Because the vast majority of small systems are managed by part-time volunteers with limited water works experience, they can be easily overwhelmed by the regulatory and operational responsibilities associated with running a public water supply system. They also cannot afford to attend traditional daylong training classes and seminars like their colleagues employed at larger municipal and investor-owned systems.

To meet these special needs, DES created a "do-it-yourself" type capacity education and outreach program. With the creation of 15 new capacity fact sheets, the Small Public Water Supply Help Center web page, the Public Water System Check-up & Self-Assessment Form, the Business Plan Template and our free, on-site technical assistance program, a wealth of information and support is now available to help motivated small systems wishing to improve their technical, managerial and financial abilities.

### **CAPACITY DEVELOPMENT STRATEGY SUMMARY**

The following four goals were outlined in the aforementioned NHCASEPWS:

1. Maintain each water system's compliance with the SDWA.
2. Provide adequate and reliable water service to customers of the public water supply.
3. Develop a formal capacity program that has a minimal impact on existing, well-run public water systems.
4. Develop a formal capacity program that does not detract from the services currently being provided by DES staff.

Water systems that do experience water service or compliance difficulties usually are deficient in one or more of the three key areas of water system operation, namely, technical, managerial and financial, which together are abbreviated as TMF. The NHCASEPWS itemized activities and initiatives associated with improving water system TMF, which are summarized below.

## **Technical**

The following existing and proposed activities were outlined in the aforementioned capacity strategy to help improve the technical capacity of a public water system in New Hampshire.

### *a) Technical Education Seminars (existing)*

Periodically, DES hosts seminars relative to technical water system topics, such as new treatment technologies and new drinking water rules

### *b) Fall Trade Show Classes (existing)*

Every October, DES hosts a water works trade show consisting of over 150 commercial trade displays and 40 one-hour technical seminars on drinking water related topics.

### *c) Water System Operator Education Courses (existing)*

Twice a year, DES holds a 10-hour small system operator course. This course is designed to help applicants prepare for the certified operator examination.

### *d) Information Resources on the Internet (scheduled completion date: 07/02)*

DES's Water Supply Engineering Bureau maintains a website on which one can access over 100 educational fact sheets on drinking water topics. 50 more fact sheets are scheduled to be published over the next two years.

### *e) Source Water Protection (existing)*

DES administers a grant program to assist small systems establish source water protection programs and acquire land for source water protection.

### *f) Technical Assistance (existing)*

Two percent of USEPA's State Revolving Fund annual grant monies can be used for direct technical services to small water systems. DES has elected to use these funds (approximately \$ 160,000.00 per year) to contract with two non-profit technical assistance providers, Northeast Rural Water Association and Rural Community Assistance Program. These technical assistance "circuit riders" are

experienced water system specialists and offer their services on a one-on-one basis free of charge to the selected system. DES generally uses NeRWA staff to diagnosis and resolve technical problems while RCAP staff is used primarily to address managerial and financial difficulties.

*g) Regionalization and Interconnection of Water Systems (scheduled completion date: 12/02)*

DES encourages any troubled water system to consider connecting to a nearby water system when economically and politically feasible. DES and its circuit riders will provide guidance, fact sheets and financing advice to systems considering this option to improve their "capacity".

## **Managerial**

The following existing and proposed activities were outlined in the aforementioned capacity strategy to help improve the managerial capacity of a public water system in New Hampshire.

*h) Water System Operator Certification Program (existing)*

New Hampshire initiated its own certified water system operator program in 1980. All community and non-transient, non-community water systems must be operated by an operator licensed by the state. Operators must possess the proper level of education and experience and pass an examination to become licensed.

*i) Contract Water System Operation Services (existing)*

Small water systems such as schools, restaurants and homeowner associations often do not wish to assume the responsibility of operating their water system. These systems must then retain the services of a contract operator. DES strongly encourages the use of contract operators, the majority of whom have demonstrated high levels of competence and compliance with drinking water regulations. More than one half of New Hampshire's community and non-community, non-transient water systems use contract operators.

*j) Adopt-a-System (proposed-scheduled completion date: 12/02)*

Adopt-a-System is a concept whereby DES will encourage full-time operators of rural municipal water systems to volunteer their knowledge and experience to very small water systems situated in their communities. DES believes this concept to be particularly useful in emergency situations whereby a municipal system could lend its equipment and expertise to the smaller system.

*k) Managerial Assistance (existing)*

One of DES's contract assistance providers, the Rural Community Assistance Program (RCAP) has extensive experience in effective water system management. DES directs RCAP to water systems in need of management training and education. These one-on-one services are provided free of charge to the water system. DES plans to have RCAP conduct a generic 3-hour capacity development course for small system owners and operators at six-month intervals. This course will be presented at night at various locations around the state.

*l) Managerial Fact Sheets (scheduled completion date: 7/02)*

To better support managerial educational services, DES will be preparing a series of educational fact sheets on various managerial topics.

**Financial**

The following existing and proposed activities were outlined in the aforementioned capacity strategy to help improve the financial capacity of a public water system in New Hampshire.

*m) Financial Advice for Municipal Water System Accountants (scheduled completion date: 12/02)*

DES, in conjunction with the New Hampshire Water Works Association, is currently negotiating with consultants to provide accountants from larger public water supplies to volunteer their expertise to smaller water systems.

*n) Financial Assistance Services (scheduled completion date: 07/02)*

One of DES's contract circuit riders, the Rural Community Assistance Program (RCAP), has extensive experience in financial issues such as rate setting, credit worthiness and basic fiscal management. DES directs RCAP to water systems in need of financial training and education. These one-on-one services are provided free of charge to the water system. DES plans to have RCAP conduct a generic 3-hour capacity development course for small system owners and operators at six-month intervals. This course will be presented at night at various locations around the state.

*o) Financial Fact Sheets (scheduled completion date: 07/02)*

To better support financial educational services, DES will be preparing a series of educational fact sheets on various financial topics.

*p) Small Systems Capital Improvement Grant Program (proposed-scheduled completion date: 12/02)*

DES will review our existing State Revolving Fund program to determine if modifications can be made that would allow for the creation of a small systems capital improvement grant program. The grant program would be structured with qualification criteria to target small systems.

### **Additional Capacity Development Initiatives**

#### *q) Generic SDWA Compliance Courses (existing)*

DES will explore the creation of a series of courses that focus on the basic elements of SDWA compliance such as bacteria testing, lead & copper compliance, etc. These courses will be targeted toward water works employees that are new to the profession.

#### *r) Water System Consolidation Facilitator (existing)*

DES will encourage larger, established water systems to acquire ownership of troubled smaller water systems.

#### *s) Investor Support (existing)*

DES will continue to issue letters or provide other information to banks or investors that seek to acquire a public water supply system.

### **Delivering Capacity Services to Noncompliant Water Systems**

DES's Capacity Development Program was established to help all public water supply systems in New Hampshire, however, it will pay particular attention to water systems that either are, or at risk to be, noncompliant.

DES will identify "at risk" systems by evaluating a water system's compliance indicators such as quantity and type of water quality violations, monitoring and reporting violations, distribution system deficiencies and the number of unscheduled service interruptions. From this evaluation, DES will produce a priority list of candidates for capacity services. For each candidate that expresses an interest in capacity services, DES will develop a customized curriculum of capacity topics, such as rate setting, basic water system maintenance, reporting requirements, etc. Services will be provided free of charge by DES staff or a DES contract "circuit rider". Follow-up visits will be scheduled at selected time intervals to evaluate the efficacy of the capacity development services. Systems that are in the midst of enforcement proceedings may be offered reduced penalties if they are willing to enroll in and complete a capacity education course.

## **Water System Business Plans**

Through many years of experience, many states, including New Hampshire, have recognized that one of the best ways to improve small system performance is to encourage its owners to operate their water system "like a business". To that end, DES encourages all public water systems to prepare a business plan. A water system business plan is a multifaceted assessment of the system's present and future managerial and financial condition as it affects compliance with regulations and the ability to produce an adequate quantity of high quality water. As per existing administrative rule Env-Ws 363 "*Capacity Assurance for Existing Public Water Systems*", public water systems that accumulate 25 or more deficient points as set forth in the rule's deficiency schedule are required to prepare a business plan.

## **CAPACITY DEVELOPMENT ACCOMPLISHMENTS SUMMARY**

DES is the sole state agency responsible for compliance with the federal and state Safe Drinking Water Acts. DES believes that compliance with environmental laws is best ensured by using a multi-tiered, multi-media approach that includes, in order of preference, education and outreach, compliance assistance, compliance monitoring and where appropriate, formal enforcement.

Implementation of DES's Capacity Assurance Strategy was carried out with the same hierarchy of compliance methods, with particular emphasis on education and outreach. Because capacity development is a holistic water system improvement initiative rather than a discrete rule, the first two years of DES's capacity development have focused primarily on education and outreach.

Below are listed the major accomplishments of DES's Capacity Development Program over the last two years.

- **Capacity Fact Sheets**

As stated earlier, our experience has shown that the vast majority of small water system owners and operators wish to "do the right thing" but are often lacking the knowledge or information to do so. Assembling and disseminating information to help improve over-all water system performance and sustainability, therefore, was the focus of our initial capacity development efforts.

DES's Water Supply Engineering Bureau currently maintains over 125 water supply fact sheets that are listed under one of the following 21 headings: *Water Supply Sources, Drinking Water Quality: General, Drinking Water Quality: Contaminants, Water Quality: Microbiological Contaminants, Water Quality: Fluoride, Municipal Water Systems: Design & Operations, Small Systems: Design & Operations, Chemical Monitoring Program, Operator Certification Program, Cross Connection Program, Source Water Protection Program, Surface Water / Filtration*

*Program, N.H. Safe Drinking Water Act, Water Supply Engineering Bureau, Overviews of the N.H. Drinking Water Industry, Financial Assistance, Miscellaneous Drinking Water Issues, Bottled Water Program, Private Well: Regulations/Issues, Groundwater Protection, Capacity Development, and Water Efficiency Practices.*

DES's water supply fact sheet web page is its fifth most popular site with over 12,000 visitors to date.

As proposed in the NHCASEPWS, DES developed seven informational fact sheets on the managerial aspects of operating a water system and six fact sheets on water system finances. The financial fact sheet topics included: *Basic Accounting Principles, Cash Flow Management, Developing Water Rates, Non-Payment of Water Fees, Controlling Expenses, Enhancing Revenues, Securing Loans and Grants & Construction Costs Summary*. The managerial fact sheets consisted of the following: *Managing a Public Water System, Managing a Public Meeting, Hiring a Qualified Consultant, Short /Long Range Planning and Conducting a Water Audit*. These three to five page fact sheets were distributed by staff at site visits, water board meetings and are posted on the capacity development website.

- **Capacity Resources via Internet**

The internet has proved to be a very effective and popular means to make information available to the public. DES's website averages over 60,000 users per month. DES, therefore, added a new capacity development link to its website known as the "Small Public Water Supply Help Center" and customized its features for the small system owner and operator. In addition to the capacity fact sheets, this site includes dozens of links to drinking water related topics such as water quality standards, SDWA information, operator training, sampling schedules and results, newsletter and other drinking water links. This website also features a link directly to DES staff in which e-mailed questions on small system management and operation will be answered. New Hampshire is one of only a few states to have a website devoted to small water systems. Through still under construction, many stakeholders have already commented on the usefulness of this site. Since its debut in May 2002, the Small Public Water Supply Help Center has registered over 1,000 "hits" per month.

- **Public Water System Check-up & Self-Assessment Form**

Staff from DES's Water Supply Engineering Bureau inspect every public water supply system at regularly scheduled intervals by conducting a "sanitary survey". The questionnaire used to conduct this survey, however, evaluates only a portion of the system's existing technical capacity to produce safe drinking water. Using self-assessment forms from other states and the American Water Works Association, DES developed a much more detailed 125-question self-assessment questionnaire that evaluates the details of a water system's technical, managerial and financial condition. Based on answers from this questionnaire, a water system is better able to prioritize water system improvements and plan for capital



expenditures. Starting in 2002, all water systems that apply for low interest loans from the State Revolving Fund must complete this self-assessment form. A copy of this form is available on the capacity website.

- **Water Supply System Business Plan**

As discussed earlier, DES encourages water systems to operate "like a business". Just like any viable business, a water system needs to ensure, among other things, that revenues exceed expenses, customers are satisfied, and reserve accounts are properly funded. Many small systems, however, are managed by volunteers, many of whom lack business expertise. To help water systems write their own business plan, DES developed a generic business plan template. This template organizes information related to a water system's technical, managerial and financial condition to help it prioritize activities needed to ensure long-term viability and SDWA compliance. A copy of this template is available on the capacity website.

- **Electronic Communications**

Over the last few years DES has been requesting the e-mail addresses of key water system personnel associated with each public water supply at the time of annual certification renewal. Water system operators have also been requested to furnish their e-mail address at the time of their permit renewal. DES currently maintains an e-mail database on approximately 300 water system operators and approximately 280 water system owners. DES has created an electronic mass e-mail system that can selectively group these e-mail addresses based on factors such as location in the state, treatment type, and population served. DES has used this e-mail system to relay water system security alerts and to announce the availability of the new capacity website.

- **Capacity Education**

A component of DES's capacity strategy was to develop a generic three-hour capacity development course and present it at night at various locations around the state. The target audience for this course is water board members and water system owners. This course would focus on the financial and managerial water system issues and the importance of active communication between the system owner and operator.

During the evening hours of May 22, 2002, one of DES's technical assistance contractors, RCAP, presented this capacity development course in Barrington, New Hampshire. Invitations to this course, titled "*Managing and Operating a Small Drinking Water System in the 21<sup>st</sup> Century*," were sent to over fifty system owners and operators in the area. Though not as well attended as anticipated, the course evaluations were very positive and attendees believed future sessions would be

more popular as benefits of this course became better known. DES is in the process of negotiating a three-year contract with RCAP to present this course twice a year.

- **Technical Assistance Contractors**

Up to two percent of EPA's State Revolving Fund can be set aside for costs associated with helping small systems solve technical, managerial and financial problems. DES has contracted with Northeast Rural Water Association to troubleshoot technical problems and Rural Community Assistance Program to assist systems with managerial and financial difficulties. Over the last two years NeRWA has helped solve technical problems at approximately 150 water systems and RCAP has assisted approximately 70 systems. DES has found using the 2 % set-aside to hire contract circuit riders is a very effective and efficient means to help small systems with their immediate and long-term problems.

- **Capacity Development Coordinator**

Recognizing SDWA responsibilities imposed on current staff did not allow for time to build an adequate capacity program, DES created a full time capacity coordinator position in July 2001. Since September 2001, the Capacity Coordinator has worked full-time on activities proposed in the 2000 Capacity Strategy and has been able to build New Hampshire's capacity program much faster than would have been possible otherwise.

## **CLOSING**

To date, the essence of New Hampshire's capacity program can best be described as "helping water systems that wish to help themselves". In the coming years, DES's capacity program will continue to implement its capacity development strategy by focusing its efforts on helping "at risk" and chronically deficient systems, creation of a capital improvement grant program for small systems, regionalization & interconnection, and the "adopt-a-system" initiative. DES's Water Supply Engineering Bureau will continue build on its successes and work toward achieving its long-term goal of having this nation's best capacity development program.

Respectfully Submitted,

George Dana Bisbee  
Acting Commissioner